

## REMARKS

Claims 1, 4, 7, 10, 13-19, 22, 25, 28, 31-34, 37 and, 40 are rejected under 35 U.S.C. § 112, second paragraph. These claims as well as claims 9 and 38 have been amended. All the Examiner's comments and objections to the claims have been taken into consideration. The amendment to claims 13-15 have antecedent support on page 16, lines 5-6 of the specification. No new matter has been introduced in the amended claims.

Claims 1-3, 7-21, 31-36 and 37-42 are rejected under 35 U.S.C. § 102 as being anticipated by Itoh. Claims 4-6 are rejected under 35 U.S.C. § 103 as being unpatentable over Itoh. Claims 21-24 are rejected under 35 U.S.C. § 103 as being unpatentable over Itoh in view of Xie. Claims 25-30 are rejected under 35 U.S.C. § 103 as being unpatentable over Vismanath.

The rejection of the claims on the prior art is being respectfully traversed.

Itoh teaches a heat-radiating device having heat-absorbing fins 32. However, the heat absorbing fins 32 in Itoh, even though they may operate as heat exchangers, do not form a channel consisting of web-like paths through which a heat medium recirculates, in a region in which the heat medium is confined, as do the protrusions in the present invention as claimed.

Secondly, *Itoh* fails to suggest any components that would form the channel of the present invention.

The first grooves 25 and the second grooves 23 in *Itoh* are different from the channel in the present invention because, even though the first and second grooves serve as paths through which the working fluid 40 condensed by the heat exchange via the heat

absorbing fins 32 returns to the edge of the bottom wall 21 or flows there over, they do not serve as paths through which the evaporated heat medium recirculates.

Further, the shapes at the cross-section of the first grooves 25 and the second grooves 23 are clearly different from the shape at the cross-section of the channel in the present invention, which is surrounded by the inner wall and the plurality of protrusions as claimed.

In addition, the heat absorbing fins 32 in *Itoh* differ from the channel of the present invention, since the heat absorbing fins 32 do not promote recirculation (transmission) of the heat medium by capillary attraction as in the present invention as claimed.

Lastly, the heat absorbing fins 32 of *Itoh* cannot achieve the high mechanical strength the present invention can achieve. This is due to the fact that the heat absorbing fins 32 of *Itoh* does not have the characteristic the present invention has, that is, all or part of the protrusions are joined or coupled with the inner wall, or are made close thereto so that a bypass of the channel is formed between the protrusion and the closest inner wall.

It is respectfully submitted that the above noted limitations of independent claims pending in the application are not readable on *Itoh et al.* and the rejection under 35 U.S.C. § 102 should be withdrawn.

Claims 4-6 depend on claims 1, 2, 3, respectively and thus contain all the limitations of their respective independent claims. Claims 1-3 and 4-6 are not obvious over the *Itoh* disclosure because there is nothing in the *Itoh* disclosure to suggest a channel formed by protrusions in a specific region as claimed.

Claims 21-24 which are dependent claims are rejected over Itoh in view of Xie. However, Xie also fails to suggest a channel formed as claimed in the claims from which claims 21-24 depend.


Viswanath also fails to suggest the limitations of independent claims from which claims 25-30 are directly or indirectly dependent. Therefore, neither the combination of Itoh with Xie nor the combination of Itoh with Vismanath would render the above rejected claims obvious to a skilled artisan.

Furthermore, compared to the thermal diffuser and the radiator according to the present invention, the heat radiating device described in *Itoh* has many restrictions when attempting to apply it to an electronic component or the like which has a large surface area to be subjected to heat radiation.

In view of amendments and remarks set forth above, this application is in condition for allowance which action is respectfully requested. However, if for any reason the Examiner should consider this application not to be in condition for allowance, the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further action.

Any fee due with this paper may be charged on Deposit Account 50-1290.

Respectfully submitted,

  
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Thomas J. Bean  
Reg. No. 44,528

**CUSTOMER NUMBER 026304**  
Katten Muchin Zavis Rosenman  
575 Madison Avenue  
New York, NY 10022-2585  
(212) 940-8703  
Docket No.: FUJX 19.423 (100794-00178)  
ES:fd